USER MANUAL

madTEC quad

TECshow

Please read the manual before installing and using this lighting
Keep it for future reference

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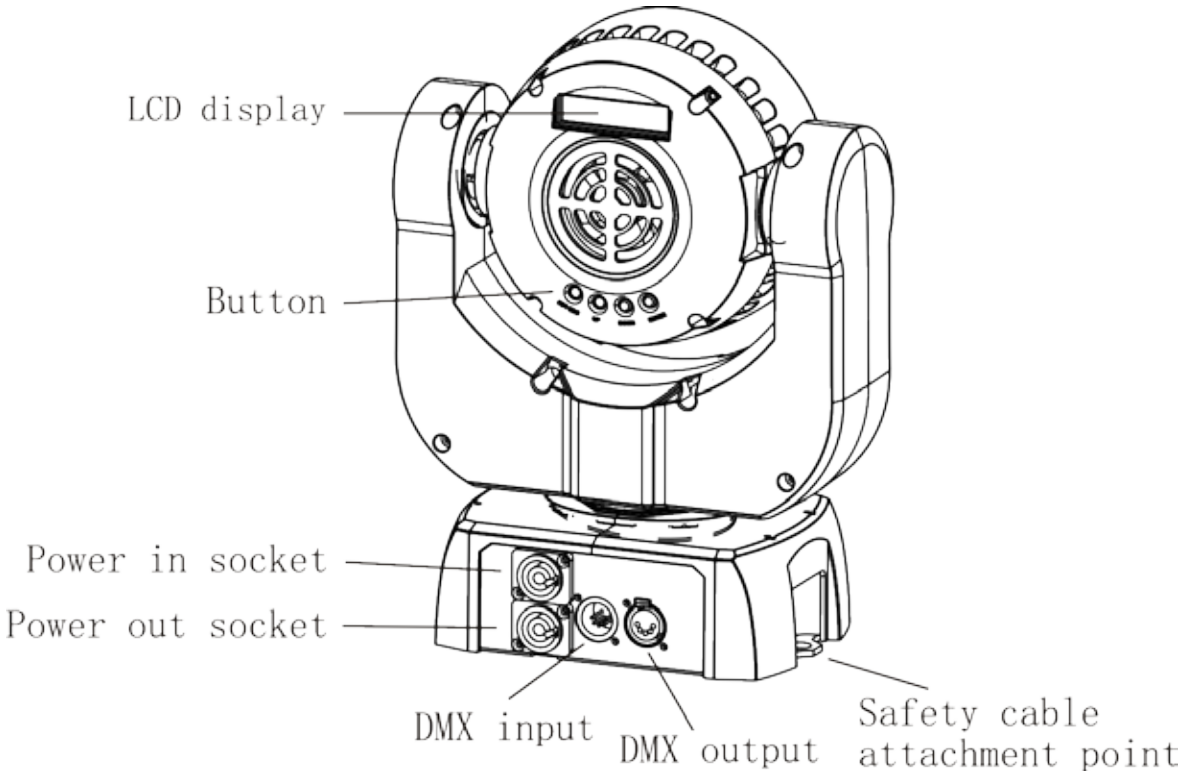
INTRODUCTION

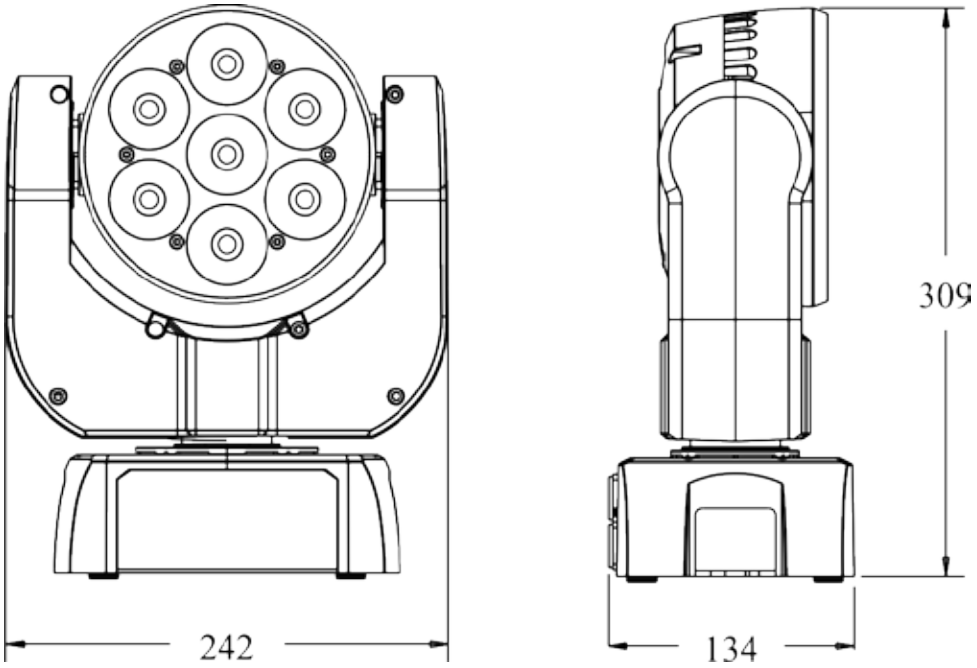
Thank you for using our products!
This lighting is a very small and light LED Moving head light; its weight is only 3.9 kg. Its beam is very narrow and very bright. It runs extremely fast. It is suitable for bar, disco, stage, decoration, etc.
This product complies with the following standards:
IEC60598-1:2003 IEC60598-2-17:1984+A2:1990

Main features

RGBW 4-in-1 high-power emitters
Excellent mixed color system
Dimmer very smooth
Tight, punchy beam
compact, silent design
Speedily
Blue LCD display
Standard DMX-512 communication protocol
Easy for power connection

OVERVIEW AND DIMENSIONS





All dimensions are in millimeters

SAFETY INFORMATION

Important

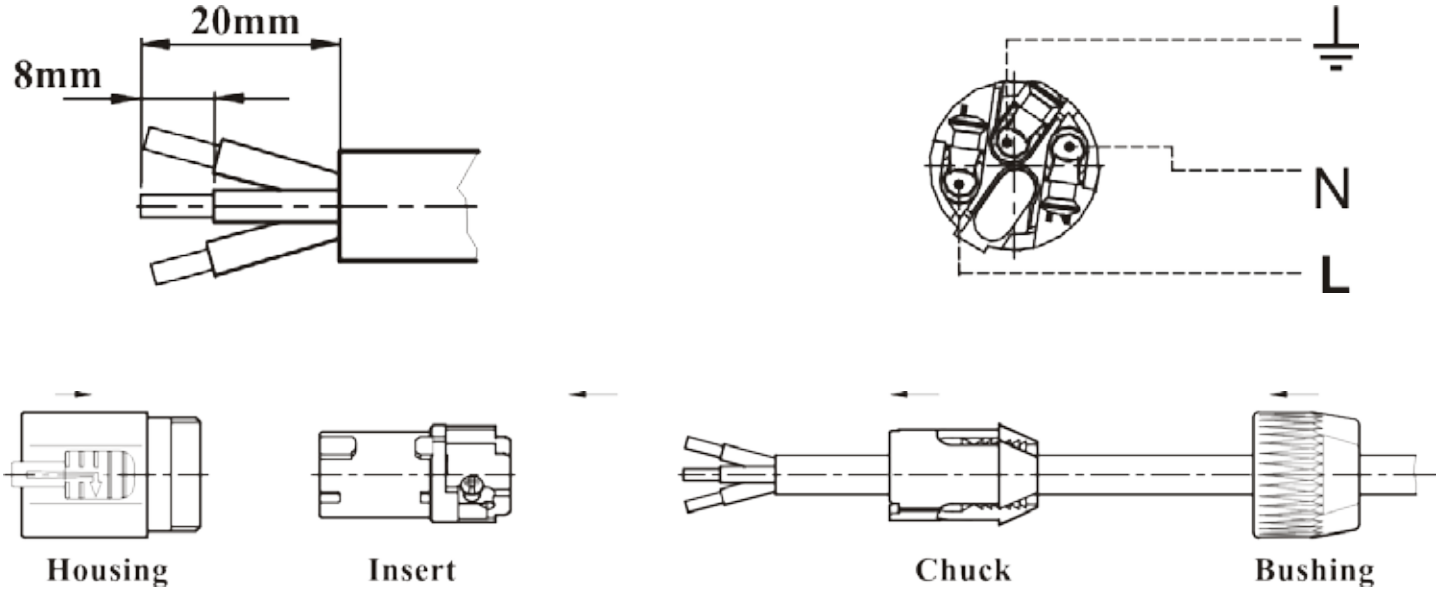
Every person involved with the installation, operation and maintenance of this device has to be qualified and follow the instructions of this manual. Manufacturer will not with responsibility for those operations not according to this Instruction

- Verify that the voltage matches the rated voltage.
- When the voltage is 110V , Do not connect more than 10 lightings in total to AC mains power in one interconnected daisy chain
- When the voltage is 220V , Do not connect more than 20 lightings in total to AC mains power in one interconnected daisy chain
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Always ground (earth) the fixture electrically.
- Avoiding hit the Light when you are move or install the light.
- The minimum distance between light-output and the illuminated surface must be more than 0.5 meters. Keep all combustible materials (for example fabric, wood, paper) at least 0.2 meters away from the fixture.
- Do not expose the fixture to rain or moisture.
- Avoid looking directly into the light source (especially those who suffer from epileptic fits)
- Maximum ambient temperature (Ta) is 40°C. Do not operate fixture at temperatures higher than this.
- The Maximum surface temperature is 50°C

- When suspending the fixture above ground level, verify that the structure can hold at least 10 times the weight of all installed devices.
- Verify that all external covers and rigging hardware are securely fastened and use an approved means of secondary attachment such as a safety cable.

POWER CONNECTION

Installing a Neutrik connector on a power cable



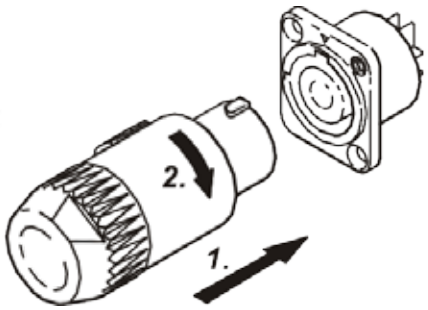
- Put bushing and chuck onto the cable.
- Prepare cable as shown above. The power cable must is a three-conductor 2.5mm2 cable.
- Insert the wire into the terminals and fasten the clamping device by a flat screw driver.
- Push insert and chuck into housing (pay attention to the guiding keyway.)
- Fasten bushing.

The color-coding schemes and some possible pin identification schemes; if pins are not clearly identified, or if you have any doubts about proper installation, consult a qualified electrician.

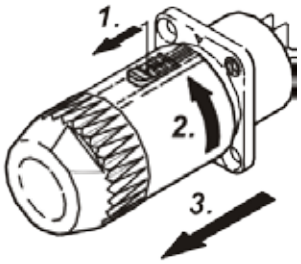
Wire color	*Conductor*	*Symbol*
Brown	Live	L
Blue	Neutral	N
Yellow/green	ground	⏚

Handling

Engagement

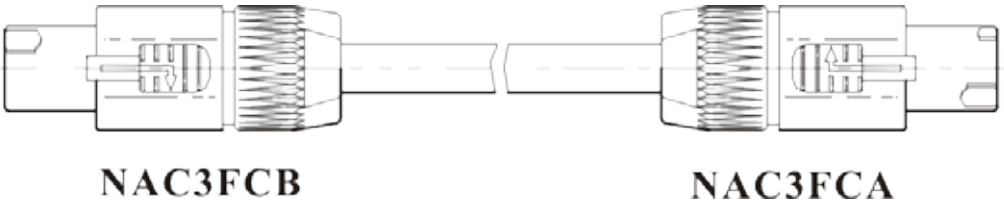


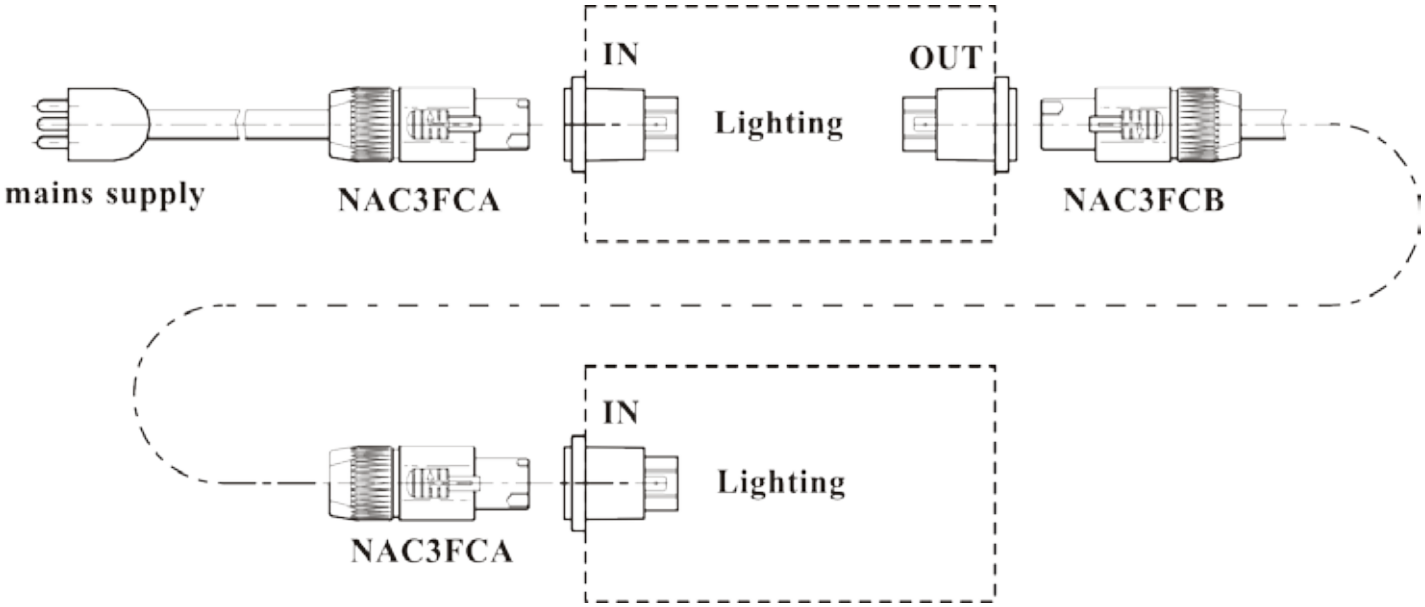
Separation



Relaying power to other devices

The lightings can be linked in a chain by power cables which installed blue and light-gray connectors on the two ends. The light-gray connector connects to the power out socket of the first lighting, and the blue connector connects to the power in socket of the subsequent lighting, and so on.





The power cable must is a three-conductor 2.5mm2 cable.
When the voltage is 110V, do not connect more than 10 lightings in total to AC mains power in one interconnected daisy chain.
When the voltage is 220V, do not connect more than 20 lightings in total to AC mains power in one interconnected daisy chain.

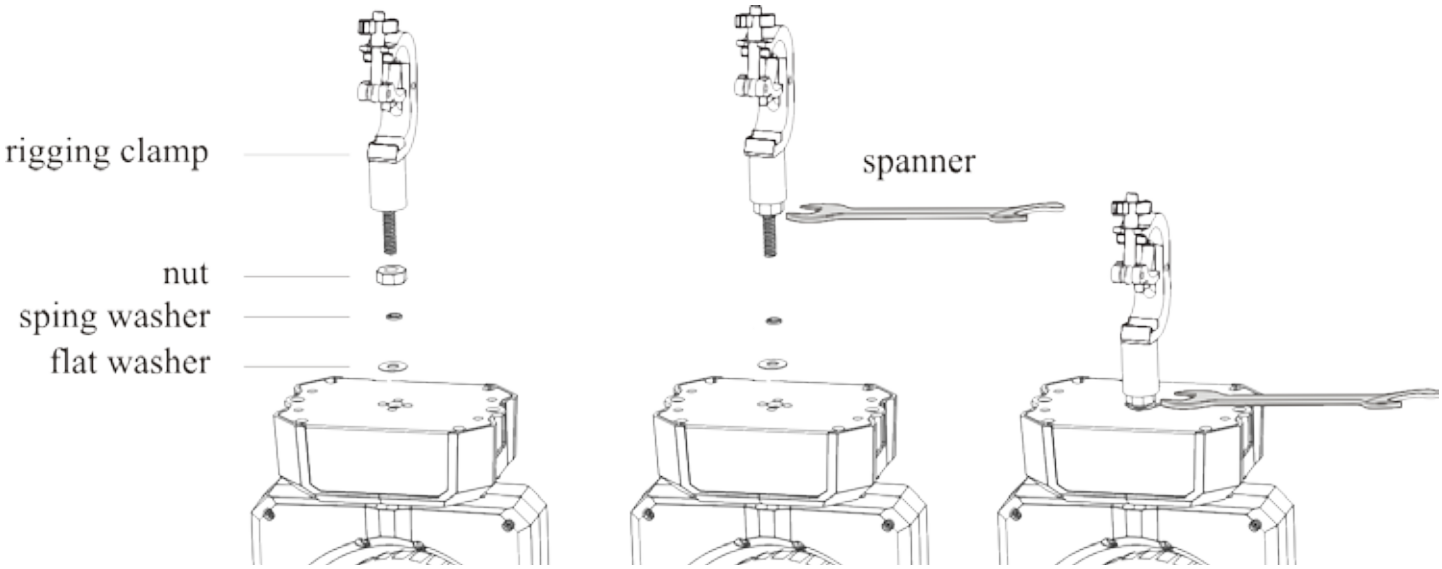
PHYSICAL INSTALLATION

This lighting can be placed on a horizontal surface such as a stage or clamped to a truss or similar rigging structure in any orientation using a rigging clamp.

When suspending the fixture above ground level, verify that the structure can hold at least 10 times the weight of all installed devices.
Verify that all external covers and rigging hardware are securely fastened and use an approved means of secondary attachment such as a safety cable.

How to install a clamp to the lighting:

1. Choose a clamp with M10 bolt, the bolt is 30~40cm.
2. Screw a M10 nut to the clamp bolt; use a spanner to tighten it.
3. Install the clamp into the base of the fixture as below picture. Using a spanner to make the clamp, nut, sping washer, flat washer tightly together.



DMX PROTOCOL

This lighting has four Channels modes, 6 channels mode, 8 channels mode, 10 channels mode and 13 channels mode. The default mode is STAGE 13 Channels mode. If you want to alter it, enter DMX menu.

13 channels mode

Channel	Value	Function
CH1		Electronic Shutter effect
	0 - 19	Shutter closed
	20 - 49	Shutter open
	50 - 64	Strobe 1 (fast → slow)
	65 - 69	Shutter open
	70 - 84	Strobe 2: opening pulse (fast → slow)
	85 - 89	Shutter open
	90 - 104	Strobe 3: closing pulse (fast → slow)
	105 - 109	Shutter open
	110 - 124	Strobe 4: random strobe (fast → slow)
	125 - 129	Shutter open
	130 - 144	Strobe 5: random opening pulse (fast → slow)
	145 - 149	Shutter open
	150 - 164	Strobe 6: random closing pulse (fast → slow)
	165 - 169	Shutter open
	170 - 184	Strobe 7: burst pulse (fast → slow)
	185 - 189	Shutter open
	190 - 204	Strobe 8: random burst pulse (fast → slow)
	205 - 209	Shutter open
	210 - 224	Strobe 9: sine wave (fast → slow)
	225 - 229	Shutter open
	230 - 244	Strobe 10: burst (fast → slow)
	245 - 255	Shutter open
CH2	000-255	**Global dimmer** 0~100%
CH3	000-255	**Pan** 0~540° /0~630° （the maximum angle base in the setting in menu）
CH4	000-255	**Pan fine**
CH5	000-255	**Tilt** 0~270°

CH5	000-255	**Tilt** 0~270°
CH6	000-255	**Tilt fine**
CH7	000-009 010-014 015-039 040-044 045-049 050-054 055-059 060-064 065-069 070-074 075-109 110-114 115-119 120-124 125-249 250-255	**Fixture control settings** **(Value must be held for 7s to activate. Setting unaffected by power off/on)** No function Reset (DMX Reset is enabled in menu first) No function Normal motor speed Maximum motor speed Minimum motor speed No function Max. cooling fan speed No function Cooling fan speed thermostatically regulated No function Fast dimmer No function Smooth dimmer No function Illuminate display
CH8		**Color wheel**
	000-009	Open(Dimmer channel enable)
	010-014	Moroccan pink
	015-019	Pink
	020-024	Special rose pink
	025-029	Follies pink
	030-034	Fuchsia pink
	035-039	Surprise pink
	040-044	Congo Blue
	045-049	Tokyo Blue
	050-054	Deep Blue
	055-059	Just Blue
	060-064	Medium Blue
	065-069	Double CT Blue
	070-074	Slate Blue
	075-079	Full CT Blue
	080-084	Half CT Blue
	085-089	Steel Blue
	090-094	Lighter Blue
	095-099	Light Blue
	100-104	Medium Blue Green
	105-109	Dark Green
	110-114	Primary Green

115-119	Moss Green
120-124	Fern Green
125-129	JAS Green
130-134	Lime Green
135-159	Red
160-164	Millennium Gold
165-169	Deep Golden Amber
170-174	Flame Red
175-179	Open
	Color wheel rotation effect
180-201	Clockwise，fast→slow
202-207	Stop（this will stop wherever the color is at the time）
208-229	Counter-clockwise，slow→fast
230-234	Open
	Random color
235-239	Fast
240-244	Medium
245-249	Slow
250-255	Open(Dimmer channel enable)

CH9	000-255	**Red dimmer** 0~100%
CH10	000-255	**Green dimmer** 0~100%
CH11	000-255	**Blue dimmer** 0~100%
CH12	000-255	**White dimmer** 0~100%
CH13	000-019 020-255	**Color temperature control** No function 100000K → 2500K

10 channels mode

Channel	Value	Function
CH1	000-255	**Global dimmer** 0~100%

CH2	0 - 19 20 - 49 50 - 64 65 - 69 70 - 84 85 - 89 90 - 104 105 - 109 110 - 124 125 - 129 130 - 144 145 - 149 150 - 164 165 - 169 170 - 184 185 - 189 190 - 204 205 - 209 210 - 224 225 - 229 230 - 244 245 - 255	Electronic Shutter effect Shutter closed Shutter open Strobe 1 (fast → slow) Shutter open Strobe 2: opening pulse (fast → slow) Shutter open Strobe 3: closing pulse (fast → slow) Shutter open Strobe 4: random strobe (fast → slow) Shutter open Strobe 5: random opening pulse (fast → slow) Shutter open Strobe 6: random closing pulse (fast → slow) Shutter open Strobe 7: burst pulse (fast → slow) Shutter open Strobe 8: random burst pulse (fast → slow) Shutter open Strobe 9: sine wave (fast → slow) Shutter open Strobe 10: burst (fast → slow) Shutter open
CH3	000-255	**Pan** 0~540° /0~630° （the maximum angle base in the setting in menu）
CH4	000-255	**Pan fine**
CH5	000-255	**Tilt** 0~270°
CH6	000-255	**Tilt fine**
CH7	000-255	**Red dimmer** 0~100%
CH8	000-255	**Green dimmer** 0~100%
CH9	000-255	**Blue dimmer** 0~100%
CH10	000-255	**White dimmer** 0~100%

8 channels mode

Channel	Value	Function
CH1	000-255	**Global dimmer** 0~100%
CH2		Electronic Shutter effect
	0 - 19	Shutter closed
	20 - 49	Shutter open
	50 - 64	Strobe 1 (fast → slow)
	65 - 69	Shutter open
	70 - 84	Strobe 2: opening pulse (fast → slow)
	85 - 89	Shutter open
	90 - 104	Strobe 3: closing pulse (fast → slow)
	105 - 109	Shutter open
	110 - 124	Strobe 4: random strobe (fast → slow)
	125 - 129	Shutter open
	130 - 144	Strobe 5: random opening pulse (fast → slow)
	145 - 149	Shutter open
	150 - 164	Strobe 6: random closing pulse (fast → slow)
	165 - 169	Shutter open
	170 - 184	Strobe 7: burst pulse (fast → slow)
	185 - 189	Shutter open
	190 - 204	Strobe 8: random burst pulse (fast → slow)
	205 - 209	Shutter open
	210 - 224	Strobe 9: sine wave (fast → slow)
	225 - 229	Shutter open
	230 - 244	Strobe 10: burst (fast → slow)
	245 - 255	Shutter open
CH3	000-255	**Pan** 0~540° /0~630° （the maximum angle base in the setting in menu）
CH4	000-255	**Tilt** 0~270°
CH5	000-255	**Red dimmer** 0~100%
CH6	000-255	**Green dimmer** 0~100%
CH7	000-255	**Blue dimmer** 0~100%
CH8	000-255	**White dimmer** 0~100%

6 channels mode

Channel	Value	Function
CH1	000-255	**Pan** 0~540° /0~630° （the maximum angle base in the setting in menu）
CH2	000-255	**Tilt** 0~270°
CH3	000-255	**Red dimmer** 0~100%
CH4	000-255	**Green dimmer** 0~100%
CH5	000-255	**Blue dimmer** 0~100%
CH6	000-255	**White dimmer** 0~100%

BUTTON

SET/ESC： Call the main menu, or escape the current menu (i.e. return to the upper menu and give up the selected item or parameter).

UP： Browse the menu item forward or increase the parameter.

DOWN： Browse the menu item backward or decrease the parameter.

ENTER： Confirm the selected item or parameter(i.e. enter the next menu, or escape the current menu and save the selected item or parameter)

MENU

Menu navigation

Main ←SET/ESC← **DMX mode** →ENT→ **DMX menu**

Main menu

DMX Menu →ENT→ **DMX menu**
UP ↑ ↓ DN
Manual Dimmer →ENT→ **Manual menu**
UP ↑ ↓ DN
Demo →ENT→ **Auto menu**
UP ↑ ↓ DN
Macro Menu →ENT→ **Auto menu**
UP ↑ ↓ DN
TEST Menu →ENT→ **Test menu**
UP ↑ ↓ DN
SET Menu →ENT→ **Set menu**
UP ↑ ↓ DN

The Menu functions provided are described in the following sections (Default) settings in bold print.

DMX Menu

Item	Options	Notes
DMX Address	001	DMX address (**default address = 001**). The DMX address range is limited so that the fixture will always have enough DMX channels in the 512 available.
No DMX Signal	Stop Run	**Stop if no DMX signal**
	Hold Run	Hold if no DMX signal
	Auto Run	Auto if no DMX signal
	Sound Run	Sound trig if no DMX signal
DMX Channels	13 Channels	**13 Channels DMX control mode**
	10 Channels	10 Channels DMX control mode
	8 Channels	8 Channels DMX control mode
	6 Channels	6 Channels DMX control mode

Manual Dimmer

Item	Options	Notes
Light Red	0~255	DMX value received on that channel**(default=255)**
Light Green	0~255	DMX value received on that channel**(default=255)**
Light Blue	0~255	DMX value received on that channel**(default=255)**
Light White	0~255	DMX value received on that channel**(default=255)**
Scan Pan	0~255	DMX value received on that channel**(default=128)**
Scan Tilt	0~255	DMX value received on that channel**(default=128)**
Scan Pan Fine	0~255	DMX value received on that channel**(default=0)**
Scan Tilt Fine	0~255	DMX value received on that channel**(default=0)**
Light Strobe	0~255	DMX value received on that channel**(default=0)**
Colorwheel	0~255	DMX value received on that channel**(default=0)**
Light Calibrate (password protect)	Cal Pan:-128~+127	Calibrate pan**(default=0)**
	Cal Tilt:-128~+127	Calibrate tilt**(default=0)**

Demo

Item	Notes
Red	
Green	
Blue	
Yellow	
Cyan	
Purple	
Pure white	
All white	
3200K	
5600K	
6500K	
8500K	
10000K	
ChangColor	Auto change color
Twinkling	Auto twinkling
Fade	Auto fade

Macro Menu

Item	Options	Notes
Motor Run	Auto Run: OFF	**No test**
	Auto Run: ON	Test LEDs and pan/tilt movement
Step Quantity	1~62	Built-in program quantity**(default=3)**
Program Step 01	Change Color	**Select Change Color program to the first program**
	Twinkling	Select Twinkling program to the first program
	Fade	Select Fade program to the first program
Program Step 02	Change Color	Select Change Color program to the second program
	Twinkling	**Select Twinkling program to the second program**
	Fade	Select Fade program to the second program
Program Step 03	Change Color	Select Change Color program to the third program
	Twinkling	Select Twinkling program to the third program
	Fade	**Select Fade program to the third program**
… …	Change Color	… …
	Twinkling	… …
	Fade	… …

Test Menu

Item	Options	Notes
Test All	Test: OFF	**No test**
	Test: ON	Test LEDs and pan/tilt movement
Test LED	Test: OFF	**No test**
	Test: ON	Test LEDs only
Test P&T	Test: OFF	**No test**
	Test: ON	Test pan/tilt movement only

SET Menu

Item	Options		Notes
Reset Machine	Reset: ON		
	Reset: OFF		
Reload Parameter	Load ON		Return all settings (except calibrations) to factory defaults
	Load OFF		
Master / Alone	Master Mode		Set one device to Master, set other devices to DMX mode, all devices will run synchronously follows the master. Only one device can set to master.
	Alone Mode		The device out of control of any external signal
Auto / Sound	Auto Mode		Auto run
	Sound Mode		Sound trig
MIC Sense	00~99%		**Default=20**
TC Switch	TC Switch Mask	ON	Disable TC Switch
		OFF	**Enable TC Switch**
	TC Switch Temp	TC Temp Cap	Capture the current temperature Yes/ No
			Capture the current temperature Yes/ No
		TC Temp Set	Set the TC temperature(password protected)
Scan Setting	Reverse Pan	ON	Reverse direction pan control on
		OFF	**Reverse direction pan control off**
	Reverse Tilt	ON	Reverse direction tilt control on
		OFF	**Reverse direction tilt control off**
	Pan Degree	630	the max Pan angle rage is 630°
		540	**the max Pan angle rage is 540°**
	Scan Blackout	ON	Enable blackout when the pan/tilt move
		OFF	**disable blackout when the pan/tilt move**
	Feed Back	ON	**Enable pan/tilt position feedback/correction system**
		OFF	Disable pan/tilt feedback for servicing
Dimmer Curve	Square Law		**Inverse square law dimming curve**
Dimmer Speed	Smooth		**Smooth dimmer**
	Fast		Fast dimmer
DMX Reset	Enabled		**Enable reset via DMX**
	Disabled		Disable reset via DMX
Fan	Regulated		**Thermostatically regulated**
	Full		Max. cooling fan speed
Information	Time: tt/mm/ss		Software creation time
	Date: mm/dd/yy		Software creation date
	Use Time		Use Time

TECHNICAL PARAMETERS

Rated voltage：100~240V
Rated frequency：50/60Hz
Power：120W
Light source：7pcs RGBW 4-in-1 LED
LED lifespan：About 50,000 hours
Beam angle：8°
Pan :540°/630°, self-correcting
Tilt: 240°, self-correcting
Channel quantity：6, 8, 10, 13
Control mode：DMX512, Master/slave, Sound active
Protection grade：IP20
Working environment: indoor
Environment temperature：-30~+40℃
Weight：3.9kg

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AMERICAN PRO develops & improves products constantly.
For this reason, the specifications and consigned information in the present user manual can be modified without notice.

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